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Relationship Between Adolescents' Leisure Boredom and Substance Use in Turkey

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Abstract

This study aimed to determine the relationship between adolescents' leisure boredom, substance use, and participation in recreational sports in a high-risk substance use region of Turkey. To determine high-school adolescents' socio-demographic characteristics, data collection relied on an adolescent self-report data form and 'substance' and 'boredom' subscales of the Adolescent Risk-Taking Scale and Leisure Boredom Scale, respectively (n = 235, all males, Mage = 15.75 years, SD = 1.19). While there was a positive correlation (r = 0.43) between leisure boredom and substance use, a small significant negative relationship was observed between leisure boredom and participation in recreational sports (r = - 0.27) and between substance use and participation in recreational sports (r = -0.16). However, as research has shown that recreational sport activities may play an effective role in preventing leisure boredom, the results of the present study suggest that sports may play role in preventing substance use as well.

Key words: Adolescents; Leisure Boredom; Substance Use; Turkey

INTRODUCTION

Developmental theories describe adolescence as a period when sharp changes occur and when there is a significant increase in risky behaviours, such as substance use, along with increased impulsiveness (65, 52). Researchers also have reported that leisure boredom experiences of substance-using adolescents were much higher than those who do not use substance (29, 65). Correspondingly, it can be inferred that leisure boredom is one of the factors contributing to substance use in this population (64, 51).

For adolescents, Leisure is defined as a 'fourth environment' beyond school, home and work. Adolescents spend 50% of their time in leisure (6). If the density of the participated activity and the meaning assigned this participation is low or below the expected level boredom may occur (31). For adolescent who is experiencing leisure boredom, this may display itself in a risky behaviour, such as substance use. Display quotations of over 40 words, or as needed.

It is highly complex to understand the manner in which leisure boredom affects substance use. There are many theories that explain reasons of boredom in people. According to psychodynamic theories, boredom is caused by not defining consciously what people want which may happen as result of suppressing desires since they are considered threatening (Greenson, 1953; cited 17).

Existentialists assert that boredom arises from lack of meaning in life and from an individual's failure to participate or ceasing to participate in activities that are compatible with personal values. Attention theorists posit that boredom results from a failure of the attention processes and a consequent inability to focus on events of interest (27, 19). Finally, arousal theorists suggest that boredom arises from the mismatch between individuals' need to be stimulated and the availability of environmental stimuli (Zuckerman, 1979; cited in 17). Studies have shown consistency in two dimensions: state and trait (60, 17, 39, 59).

In the case of 'trait', whatever the situation is, there is always a distress, and individuals may have personality especially prone to boredom, whereas, in the case of 'state', boredom is a distress attached to any type of situation, and it occurs when the presented situation is not interesting enough (17). Vadonovich and Watt (59) classified leisure boredom as a context-specific trait boredom within "trait." Based on the items of the scale used in this study, leisure boredom conceptually reflects context-specific trait boredom: inability of the adolescents to organize properly in their free time, dissatisfaction from the participated activity or the activity does not meet their expectations.

Substance Use in Turkey

Numerous studies have observed a significant increase in substance use among adolescents; these studies have indicated that the age of substance use continues to decrease (22, 20, 56). According to the TUBIM (55) the average age of initiation of substance use is 13.88, whereas 75% of substance users started using substances before the age of 20. The Parliamentary Inquiry Commission Report (54) indicates that factors such as the recent influx in migration from the countryside to the big cities and inability to provide youth with activities that can help them use their leisure time effectively contribute to increase in substance use. The findings of the studies on the role of leisure activities are crucial for Turkey as a developing country in terms of its development as well as its policies and public health. Despite its importance, the number of the studies that research the relation between substance use and leisure boredom in Turkey is quite limited. Ertuzun et al. (16) in their study on substance users have explained that users associated the addiction as an irreplaceable habit, derivational crisis and death, and the users stated that the reason of their addiction is peer groups, problems at family and leisure boredom resulted from lack of leisure time activities that would satisfy them. In Turkey, there is also not enough study to evaluate whether boredom is an actual problem among adolescents.

Relation between Leisure Boredom and Substance Use

As mentioned above, one of the reasons that appears often in adolescents' history of substance use is leisure boredom (29, 68, 64, 65). Some studies in literature have determined that risky behaviours such as media violence, internet addiction and alcohol or drug addiction are related to leisure boredom (68, 45, 18, 41). Studies have determined that boredom is higher among smoking and substance-user adolescents than that of their non-user peers (47, 29). In contrast to the literature, Wegner et al. (63) have observed no relation between leisure boredom and substance use despite the leisure boredom of adolescents. In Iceland, a quasi-experimental study with control group that observed a 12-year-change indicated that organized leisure activities had positive effect on adolescents and decreased the number of bad habits (OR = 0.89, 95% CI 0.82, 0.98, p = 0.012) (35). Intervention studies have an important role for the decrease of substance use and the retardation of the first-time use age because substance use often starts during adolescence (7, 23). In this case, adolescents' choice of leisure activities and after a negative feedback they got from their choice, an ability to reconstruct new activities may prevent their substance use. Intervention studies to prevent the use and spread of addictive substances in society are conducted to minimize the personal and social problems caused by these substances and develop healthy behaviours in society. The principal aim of the prevention studies is to strengthen adolescents and improve the ability to decline substance use.

A study conducted in South Africa indicated that activities with peers that are conducted in risky environments, activities that are non-controlled and non-constructed, in addition to the effect of the lack of leisure sources, might turn into a risky behaviour (64, 58, 37). Studies have indicated that substance use of individuals is affected by their leisure experiences as well as by people who they spend their leisure with (42, 36). The substance use of individuals that occurred with boredom during their leisure also decreased their interest towards the

activities of their choice that provide immense pleasure (40, 12 43, 62).

The Relationship of Recreational Sports Participation with Leisure Boredom and Substance Use

Leisure is defined as a time beyond the one required organically for existence; it consists of things that we have to do to maintain our lives beyond biological needs. Recreational activities, on the other hand, refer to activities that we have chosen based on our judgments and pleasures in our leisure (44, 8). Recreation and leisure activity are interwoven concepts. For recreation, the emphasis is on the 'content', while in the state of utilization of leisure, the emphasis is on the element of 'time' (10). Recreation includes various leisure activities such as games, sports, recreation, physical activity, relaxation and hobbies along with artistic and cultural occupation. Recreational sports, in one hand, contribute to personal goals and, on the other hand, contribute to the psychological and physical health. Participation in leisure activities, including exercise and socialization, is associated with components such as physical health and well-being (26, 53, 13, 14, 50, 48).

Active leisure activities, such as exercising, are highly positively correlated with wellness (28, 12, 49, 46). Individuals who have a sense of wellbeing may organize their leisure times better or may not have difficulty in reconstructing their leisure. At the same time, the recreational sports include a social environment they provide opportunities for the individuals to be aware of different recreational activities which ultimately lead to reconstructing their leisure time. Therefore, participation in recreational sports may eliminate leisure boredom or facilitate reconstruction of the state of boredom. In turn, this can indirectly reflect the prevention of adolescents' substance use. Reconstruction of individuals' boredoms with activities such as exercise might play an active role to prevent the substance use (36). Barnett (3) in his study has stated that boredom in adolescents depend on factors such as internal (difficulty in defining leisure interest) and external (being obliged to do an activity). This exemplifies negative impact of characteristics and conditions on boredom. For example, when the adolescents realized that they got bored due to a leisure activity (context-specific trait boredom), as argued in self-as-entertainment theory (40) and in Flow theory, they are expected to reconstruct the activity to minimize any negative boredom experience (2). This may indirectly reflect in preventing substance use in adolescents.

It is thought that reconstructing the leisure activities with exercises would play an important role in reducing their substance use (36). Probably, substance use comes into individuals' minds when they are not occupied with an activity that could satisfy them. Exercise may provide an additional benefit in preventing substance use because it activates dopaminergic reward pathways (24). However, at this point, individuals' voluntary participation is important. In this light, this study determines the relation between leisure boredom and substance use of adolescents in an area that is considered to be high risk for substance use.

H1. The substance use of adolescents who are attending high school is positively correlated with boredom subscale of the leisure boredom scale.

H2. There is a negative correlation between high school adolescents' participation in recreational sports and boredom subscale of the leisure boredom scale.

H3. There is a negative correlation between high school adolescents' participation in recreational sports and substance use.

MATERIAL & METHODS

Participants

The research sample was consisted of high-school students studying in areas considered to be high risk for substance use in Konya city center. According to the Provincial Education Directorate, one of the schools within high risk of two schools in the area, was randomly selected. Although all students of the school participated in the research (N = 2000) during the study period, the questionnaire was completed only by 235 students. Since female students do not prefer both vocational high schools, which include technical disciplines such as motor vehicle technology and furniture decoration, the sampling of the study is only consisted of male students (n = 235).

Table 1. Frequencies and descriptive statistics of demographic variables

		n	%
Education Level	High school 1	153	65.1
	High school 2	29	12.3
	High school 3	33	14.0
	High school 4	20	8.5
Mother Education Level	Primary	124	52.8
	Secondary	56	23.8
	High	25	10.6
	University	3	1.3
	Missing	27	11.5
Father Education Level	Primary	93	39.6
	Secondary	58	24.7
	High	47	20.0
	University	12	5.1
	Missing	25	10.6
Perceived Income	High	17	7.2
	Good	83	35.3
	Average	125	53.2
	Low	10	4.3
Living Place	City	190	81.0
	Town	33	14.1
	Others	12	4.9
	Mean	Std. Dev.	
Age	15.75	1.19	

Procedures

Data for this study was collected by the researchers conducting this study talking to the students agreed to participate in the research (n = 235) face to face between 15 November 2015 and 15 December 2015. Before starting the research, verbal consent was obtained from the school director and students who participated in the study . Researchers took the permission of the school administration and counsellor and informed students about the survey by entering the lessons during which students were available. The necessary permission was obtained from the Ethics Committee of Selcuk University, Faculty of Sport Sciences. Students were informed that the participation is voluntary that their names would not be mentioned in surveys and that the results would not be shared with anyone. They were asked to fill the survey and put it in a box placed at the corner of the classroom to avoid the recognition. Implementation of the survey took about 20 minutes.

Measurements

To determine the socio-demographic characteristics of high-school adolescents and the frequency of their participation in recreational sports, data collection relied on adolescent data form, the 'substance' subscale of Adolescent Risk-Taking Scale (ARQ) and 'boredom' subscale of the Leisure Boredom Scale (LBS).

Adolescent Information Form

The participant students were asked to fill a personal data form comprising six questions on their age, parents' education level, family income, place of residence and educational status and a 4-point Likert Scale survey comprising 10 items developed by the researchers. The survey determined the frequencies of participation in recreational sports within 12 months from 1 (not at all) to 4 (almost every day). In the survey, frequency of adolescents' participations in activities such as walking, running, fitness, martial arts, weight lifting, racket sports, ball sports, climbing/trekking/mountaineering, fishing and horse riding are identified with the answer format 'never, rarely, sometimes, often' and evaluated on average scores (38). For this study, the 'participation in recreational sports' scale was calculated as $\alpha = 0.80$.

Adolescent's Risk Taking Questionnaire (ARQ)

ARQ is a five-point Likert-type scale that indicates various adolescent risk-taking behaviours. In this study, substance use subscale of adolescent risk taking questionnaire (26 items), developed by Kiran-Esen (33) which is based on the Adolescent Risk-Taking Questionnaire of Gullone et al., (25), was used. Reliability of ARQ has been evaluated by internal consistency, item-total correlation and test-retesting. In this study, the substance use subscale (5 items) which is one of the subscales in Risk-Taking scale was used. In the subscale of the substance use, there are five items: 'drug use' 'drinking alcohol', 'getting drunk', 'smoking', and 'inhaling addictive substances such as thinner, glue'. Adolescents are asked choose one of the following options: 'I always do it' (5 points), 'I often do it' (4 points), 'I sometimes do it' (3 points); 'I rarely do it' (2 points) and 'I never do it' (1 point). The Substance use subscale is evaluated on average scores. For the assessment of internal reliability of ARQ, internal reliability coefficients (Cronbach's alpha) have been calculated. The internal consistency coefficient for the entire 26-point scale is 0.88. For the Risk-Taking Subscale related with substance use, the score was .62. To determine the reliability of ARQ in terms of stability, reliability coefficients have been calculated by test-retesting method applied twice to a group of 208 sophomore students with three weeks intervals. A reliability coefficient of 0.85 was obtained for the

entire scale (33). The findings regarding ARQ scale validity and reliability demonstrate that the scale can be safely used. In this study, for the substance use subscale, it is calculated as α = 0.86.

Leisure Boredom Scale (LBS)

For this part, this study employed LBS that was developed by Iso-Ahola and Weissinger (31). This scale was adapted into Turkish and tested for the validity and reliability by Kara et al., (32). The scale determines the subjective perceptions of leisure boredom. The original scale that consists of a single subscale and 16 items is used on five-point Likert scale (1 = strongly disagree to 5 = strongly agree). The total grade score ranges from 16 to 80. The increase of the points obtained from the scale means that the boredoms is increasing. The adaptation by Kara et al., (32) into Turkish found through its exploratory factor analysis that the scale yielded two subscales, which are 'boredom' (5 points) and 'satisfied' (5 points) and 10 items.

Boredom subscale reflects the negative perspective against leisure activities of individuals (I usually don't like what I do in my leisure, but I do not know what else to do). 'Satisfaction' subscale reflects the positive perspective of the individual for the leisure perception of the individual perspective (Leisure idea excites me). In the Turkish version of the scale, the interval between boredom and satisfaction subscale range from 5 to 25 for each. The Chronbach's alpha coefficients have been calculated for 'boredom' subscale as α = .72, for 'satisfaction' subscale as α = .72 and for the entire scale as α = .77. Confirmatory factor analysis revealed the compliance index values as χ^2/df = 1.83, RMSEA = .05, GFI = .96, CFI = .95, SRMR = .05, NFI = .90, which fall within the valid range. This study is planned on 'boredom' in leisure time. Since the positive result in perceiving leisure time is not questioned, only the boredom subscale part of the scale is used. For this study, the 'boredom' subscale was calculated as α = 0.73.

Statistical Analyses

This research, a descriptive and relational design, is conducted to determine whether there is a relation between leisure boredom and substance use and participation to recreational sports among high-school adolescents.

Statistical analysis of the study has been performed using on a statistical package program. Descriptive statistics on the adolescents' socio-economic characteristics are represented by percentage, average and standard deviation. Spearman's rho correlation was employed to determine the relation between leisure boredom, substance use and the participation in recreational sports . Because it did not follow a normal distribution according to Kolmogorov-Smirnov test and Kurtosis-Skewness' values.

Table 2. The reliability, normality and descriptive statistics of subscales

	Sub Scale	Item number	Chronbach's Alpha	Mean	Std. Dev.	Kolmogorov Smirnov Z	P	Kurtosis	Skewness
Recreational Sports Participation	-	10	0.80	2.29	0.61	0.11	0.00	- 0.29	0.46
Risk Behaviors	Subs. Use	5	0.86	1.63	1.00	0.30	0.00	1.99	2.00
Leisure Boredom	Boredom	5	0.73	12.40	4.71	0.08	0.00	0.06	0.53

The fact that the participation of adolescents in the sample in recreational sports is 2.29 out of 4 demonstrates that the participation is moderate. Nevertheless, the fact that substance use is 1.63 out of 5 demonstrates that substance-use ratio is low. Besides, the fact that adolescents' boredom was 12.40 out of 25 indicates that participants do not have a high level of boredom (Table 2). The boredom level 12.40 out of 25 indicates that it is not high among the participants.

Table 3. Substance use frequency distribution

		I never DO IT	I rarely DO IT	I sometimes DO IT	I often DO IT	I always DO IT
Smoking	n	137	12	9	16	61
	%	58.3	5.1	3.8	6.8	26.0
Drinking Alcohol	n	170	18	26	1	20
	%	72.4	7.7	11.1	0.4	8.5
Getting Drunk	n	187	13	13	5	17
	%	81.3	5.5	5.5	2.1	7.2
Smelling addictive substances such as thinner and adhesives	n	206	9	4	23	14
	%	87.7	3.8	1.7	0.9	6.0
Using Drugs	n	216	1	4	1	13
	%	91.9	0.4	1.7	0.4	5.5

The most common substance used, as Table 3 indicates, is cigarettes with a rate of 26%. The ratio of substance-user adolescents in the sample group has been determined as 6%, while the ratio of drug users has been determined as 5.5% (Table 3).

Table 4. Relationship between participation in recreational sports substance use and boredom

		Recreational Sports Participation	Substance use	Boredom
Recreational Sports Participation	Correlation Coefficient		- 0.16*	- 0.27**
	Sig. (2-tailed)		0.01	0.00
	N		235	235
Substance use	Correlation Coefficient	- 0.16*		0.43**
	Sig. (2-tailed)	0.01		0.00
	N	235		235
Boredom	Correlation Coefficient	- 0.27**	0.43**	
	Sig. (2-tailed)	0.00	0.00	
	N	235	235	

As shown in Table 4, there is a positive correlation between boredom and substance use ($r = 0.43$, $p<0.01$) (for H1). Negative relationship was observed between boredom and participation with recreational sports ($r = - 0.27$, $p<0.01$) (for H2) and between substance use and participation with recreational sports ($r = - 0.16$) (for H3).

DISCUSSION

This study aimed to determine the relation of adolescents' leisure boredoms with substance use and the relation between participation in recreational sports and substance use and leisure boredom in a risky environment in terms of substance use. Research findings support a positive correlation between adolescents' leisure boredom and substance use. A negative relation was found between participation in recreational sports and leisure boredom and substance use.

While the most commonly used substance item in the sampling group was found as cigarette, the study found out that substances such as 'thinner' or 'glue' were used at least once by 5.9% adolescents.

Furthermore, the rate of adolescents that used substance at least once was found as 4.9%. According to TUBIM (55), the ratio of the substance use among high-school graduates is 2.6%. Compared with these rates, it can be said that our research findings are considerably high. This difference can be explained by the fact that the study sample resides in a risky area. The Parliamentary Inquiry Commission Report (54) indicated that 75% of substance users started using substances before the age of 20. National and international studies indicate that there is a significant increase in substance use among adolescents and that the age of first substance use continues to decrease (22, 20, 56). The findings indicated a positive correlation between boredom subscale of adolescents' leisure boredom scale and substance use, so hypothesis H1 was accepted. It can be said that increase in adolescents' leisure boredom is accompanied by an increase in substance use. In this regard, findings of this study are consistent with those of the literature. Some studies indicated that almost 50% of male adolescents at risk who rely on substance use to reduce negative experiences of boredom spend time in drinking environments; these studies indicated a relation between substance use and leisure boredom (68, 41). An adolescent who feels bored can reduce the risk of substance use by reconstructing this state of mind by choosing a new activity. While some can cope with this feeling more easily, others may display risky behaviour, such as using substance as a way out from this situation. At this point, 'leisure education programmes' can positively influence adolescents in learning how to cope with boredom and substitute it with an activity so that adolescents can cope with this feeling without displaying any negative risky behaviour. An adolescent who did not find the right activity for his leisure time and did not enjoy its satisfaction can search for this pleasure in substance use. According to Iso-Ahola and Crowley (29), an individual's leisure boredom can be a motivating force for major social problems such as substance dependence. A study conducted in South Africa emphasised that leisure boredom plays an active role in substance use (65). Many studies have indicated that familial factors (66, 61, 1, 5) and factors related to the peer group (15) are prominent in the youth's tendency to substance use. This may be due to adolescent's inability of matching leisure activities with their parents or peers.

According to some studies, the ratio of substance use of adolescents who do not reside in a sport center or natural environments is higher compared with that of other adolescents who participate in healthy recreational activities such as being in a sport center or national environments (4, 57, 21).

H2 hypothesis has been accepted since there was a meaningful negative relation between participation in recreational sports and leisure boredom. It can be said that leisure boredom is lower in adolescents that participate actively recreational sports in their leisure time. Participating in leisure activities may contribute to the health and wellbeing of the individuals (64). For adolescents, leisure means freedom experience, internal motivation and positive effect (34). Active recreational sports such as doing exercise are highly positively related to wellbeing (28, 11, 49, 46). Adolescents feeling good may easily cope with boredom. Not to choose a related activity in leisure time may contribute to boredom experience (64).

H3 hypothesis has been accepted since there was a meaningful negative relationship between participation in recreational sports and substance use. Substance use was found lower in adolescents who participate in recreational sports. Since exercise activate dopaminergic reward pathways, it can be beneficial in preventing substance use as well (24). In Iceland, a quasi-experimental study with control group that observed a 12-year-change indicated that participation in organized leisure activities four or more times a week had positive effect on adolescents and decreased the number of bad habits (OR = 0.89, 95% CI 0.82, 0.98, p = 0.012) (35). In their study Liebregts et al. (36) indicated that participation in recreational sports play an important role in preventing their substance use. When the substance user individuals are not busy with activities that would satisfy them in their leisure time, it is highly possible that they want to use substance.

RECOMMENDATIONS

It is the limitation of the study that the sampling group was consisted only male students and conducted only in one city. The mechanisms to cope with leisure boredom lack in this study. This study may be a reference for future studies. For this field which is rarely researched in national literature, it would clearly define the problem and increase suggestions for solution of this problem if the studies determine leisure boredom sampling different substance user groups experimentally in

qualitative or quantitative designs with structural equation modelling. The mechanisms on which substance-user individuals' boredoms depend may be a new topic for new researchers. The opinions of individuals whether they see the substance use as a leisure activity or not may be a new research topic for the national literature. In addition, a follow-up study may be conducted about leisure habits of individuals who have been treated for substance abuse. Simultaneously, an experimental study can be planned with a control group in which a recreational program is implemented during admission in the centers of treatment for preventing addiction in risky regions.

Also, a study can be implemented to mixed gender high schools in large cities such as Istanbul, Ankara, and Izmir to compare the substance use and participation in recreational activities.

CONCLUSION

In conclusion, it can be claimed that adolescents who experience leisure boredom are more prone to substance use. Participation of recreational sports influences positively leisure boredom and is decreased substance use.

Therefore, for adolescents, who are in a critical transition period of their lives, it is crucial to plan satisfactory, motivating, entertaining and restful activities of their own choice to keep them away from risky behaviors such as substance use.

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